Agenda Item 6

Summary of TMDL Efforts

SWRCB Letter on TMDL Federal Rule

TMDLs and Water Quality

STATE WATER RESOURCES CONTROL BOARD

Presented by:

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Division of Water Quality

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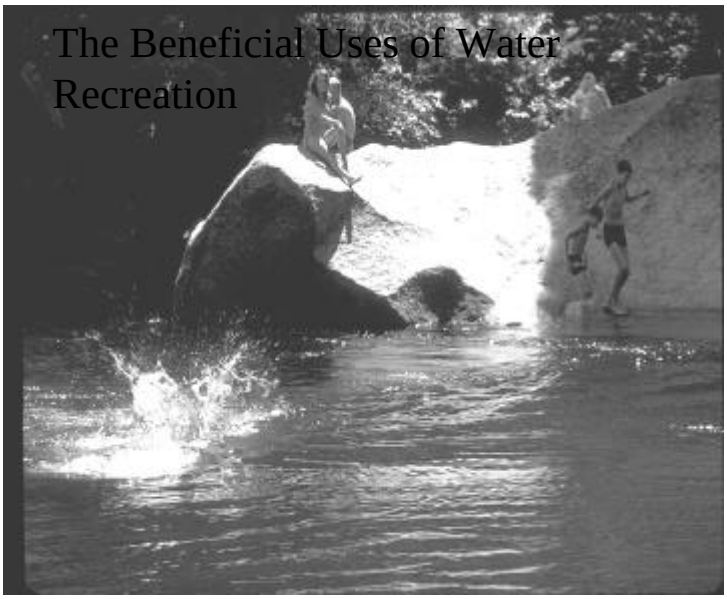
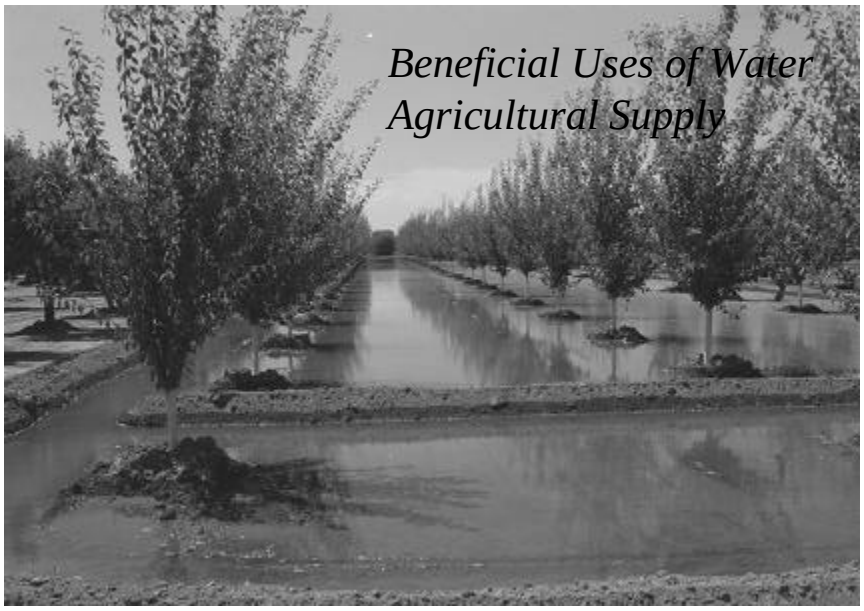
How Do We Define Water Quality?

- Maintaining the Use
  - Recreation
  - Outstanding Natural Resources
  - Agricultural Supply
  - Drinking Water
  - Aquatic and Riparian Species


The Beneficial Uses of Water -
Recreation


The Beneficial Uses of Water:
Outstanding Natural Resources



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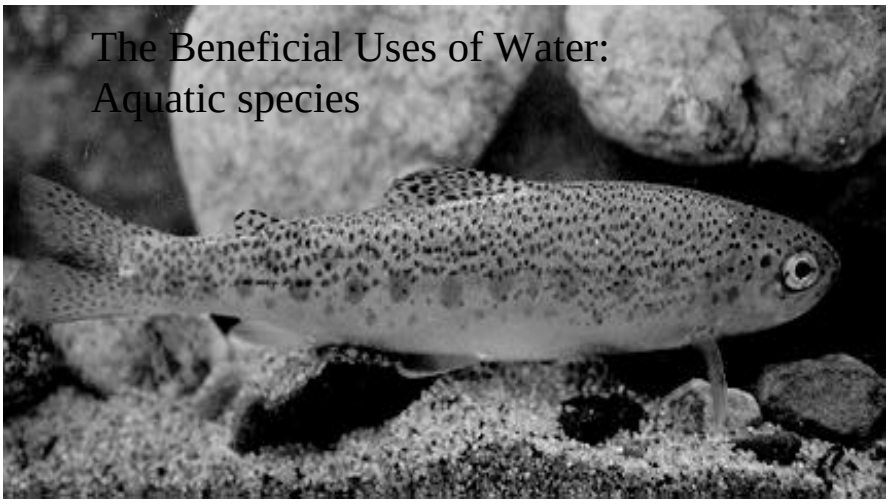
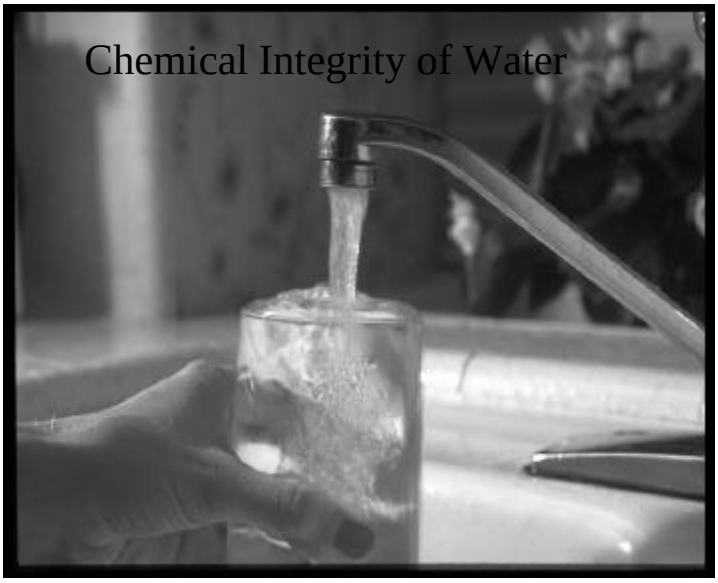


How Do We Define Water Quality?

- Preserving the integrity of the waters
  - Chemical, physical, Biological

Chemical Integrity of Water



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Physical Integrity of Water

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Biological Integrity of water

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What is a Water Quality Impairment?

- When we lose or diminish a Use
  - Aquatic Species
  - Drinking Water
  - Recreation (beach)

What is a Water Quality Impairment?

- When we lose integrity of the water body
  - Physical, Chemical, Biological

How do we know when we have an Impairment?

- Direct Measurements
  - fish kills
  - beach closure
  - sedimentation

How do we know when we have an Impairment?

- Water Quality Standards
  - Standards combine Uses and characteristics needed to support uses.
  - Narrative:
  - Numeric:
    - Federal law: “Criteria”
    - State law: “Objectives”
- Standards set to be protective

Water Quality Standards

- Narrative: e.g., Controllable water quality factors shall not cause detrimental increases in concentrations of toxic substances found in bottom sediments or aquatic life.
- Numeric:
  - 4 day average concentration of Chromium IV = 50 parts per billion
  - 1 hour average concentration of Chromium IV = 1,100 parts per billion

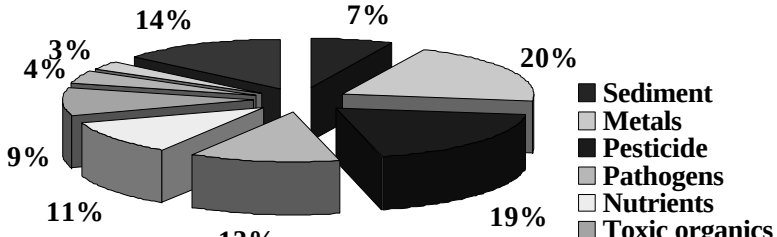
Standards and Basin Planning

- Standards become regulatory when put into Basin Plans
- Porter Cologne requires balancing needs when setting standards
- Basin Plans require Programs of Implementation.

How does the TMDLs Process fit in?

- Process starts with public solicitation of information about water body conditions
- identify impaired waters - the 303(d) list.
  - List any water body that is impaired after implementing required technology based controls
  - CA 1998 list has 509 water bodies listed

Statewide TMDL Pollutants



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How does the TMDLs Process fit in?

- Where the EPA administrator finds it suitable = all listed waters, a TMDL must be developed
- Each TMDL must be designed to attain standards
- TMDLs must be incorporated into Basin Plans

TMDL POLLUTANTS BY REGION

POLLUTANT TYPE	1	2	3	4	5	6	7	8	9
Sediment	27	10	25	1	3	20	3	6	4
Metals	1	36	12	127	71	26	3	11	14
Pesticides	0	66	13	149	47	1	3	5	2
Pathogens	0	6	18	109	2	1	3	19	30
Nutrients	7	9	21	84	5	9	2	15	11
Toxic Organics	0	32	6	79	4	3	1	1	1
Other	13	9	1	153	7	14	0	2	4
Toxicity	0	0	2	31	14	1	0	2	3
Salinity	0	1	3	24	8	12	1	3	0
TOTAL # TMDL/REGION	48	169	101	757	161	87	16	64	69
TOTAL TMDLS = 1472									
Total Waterbodies	32	59	46	168	59	75	6	28	36
TOTAL WATERBODIES = 509									

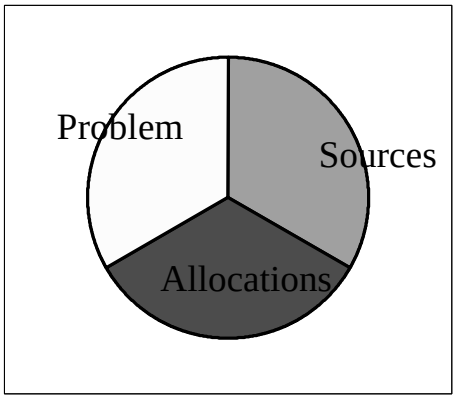
How Do TMDLs fit in?

- TMDLs must draw from many programs
- Create defined products
- Create an impetus to come to the table
- Blend point source and nonpoint source management

What is a TMDL?

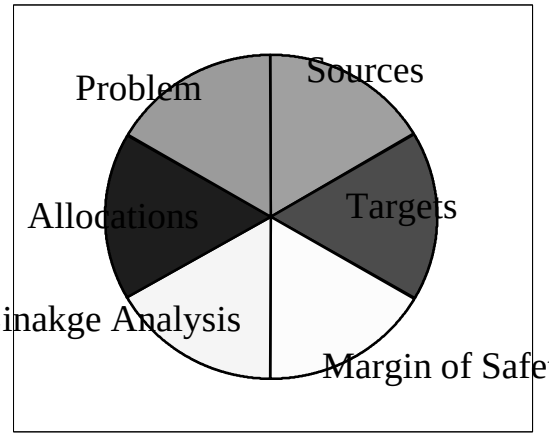
- A Written Water Quality Attainment Strategy - a document
- A TMDL includes a description of the maximum amount of pollution allowable and divides that amount among sources.
- Differences between federal and CA TMDLs

Simplest TMDL model



USEPA TMDL

- South Fork Eel



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CA consent decree model

- Newport Bay Nutrients
- Problem, source, target, allocation MOS, linkage, implementation actions, phasing, evaluation, verification of assumptions, revisiting.

Newport Bay Sediment TMDL

- **Performance Standards**
  - No habitat change in Newport Bay
  - Maintenance of sediment traps
  - No impacts to navigation or recreation
- **Numeric targets**
  - Habitat composition, Minimum depth of in bay sediment basins
  - Dredging frequency, Sediment load

Newport Bay Sediment TMDL, cont.

- **Allocations:** by category
  - Opens space - tons/year
  - Agricultural lands - tons/year
  - Construction sites - tons/year
  - Urban areas - tons/year
  - Sediment trap capacity - %
- **Conditional WDR waivers**
- **Monitoring requirements**

CA Watershed model

- Multiple pollutants
- Focus on system function, problem integration
- Sac R. Watershed group,
- South S.F. Bay copper and nickel

South Bay Copper and Nickle TMDL

- Watershed consortium
  Municipalities, Agencies, Industry, Environmentalists
- Conceptual model, Impairment Assessment
- Scientific Review
- Decision making, action plan to RB

Current TMDL work

- Over 100 TMDLs currently under development
- EPA developing some TMDLs under consent decrees
- Regional Board producing reports for EPA TMDLs
- Regional Boards using Consent Decree and Watershed Models

The Federal Rule

Our 4 big concerns:

- Definitions are too narrow
- Alternative programs
- Pollution vs Pollutants
- Implementation requirements

Litigation

- Current suits are against USEPA for failure to establish TMDLs
- Next round of litigation will be over appropriateness of TMDLs

Status of Litigation

- Existing Decrees: Newport, North Coast, L.A. Region
- Pending suits: State wide “Keepers suit” and CASA/SCAP
- Garcia R. suit contesting EPA authority to pursue TMDL for Nonpoint Sources

Impacts of Litigation

- Has forced the issue
- Limits EPA creativity
  - Driving us towards paper, simple TMDLs
- Undermines Watershed approach

Porter Cologne & Litigation - The Knife Edge

- Substance vs. Paper Plans
- Balanced Water Quality protection # simple TMDLs
- Cumulative effects and land management
- We need to reach beyond the water to be successful

Substance from Commitment

- People must understand the goal
- We must realize we are responsible
- Rules can create responsibility
- Substance requires commitment beyond the rules

Measures of Progress & Performance

- It takes time for ecological systems to respond
- Attaining standards over night
- AB 982
  - Comprehensive Monitoring Plan
  - Recommendations on the program

Measures of Progress

- Need to measure biological, physical, chemical integrity
  - Status and trends
- Screening level work and detailed assessments
- Help: DPR, Municipalities, Special Districts, Fed Agencies

Measuring Performance

- Budgets, work plans, products
- Adopted TMDLs
- Regulatory Actions:
  - Permits and enforcement actions

Measuring Performance

Engaging people:

- numbers of stewardship groups
- numbers of school programs
- Acres restored, miles improved
- Practices being used
- Collaborative efforts
- Trust and understanding

Conclusion

- TMDLs need more than the Water Boards
- Strategy: Use Science to describe conditions and goals

  Build management around public engagement.
- The law requires we do the numbers
- Success requires we work with people

TMDL
POLLUTANTS
BY REGION

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Summary Status Report

TMDL WORK DESCRIBED IN FED FUND FY 00/01 WORK PLANS
And TMDL work identified in 99/00 state and federal work plans

Organization	Project Title	Fed Grant Workplan
Reg. 1	TMDL outreach & coordination Big R., Mattole R., Trinity R., Klamath R.	
	Basin Plan amendment for Region wide Sediment TMDL Imp. Plan	
	Albion R., sediment	1
	Big River sediment	1
	Eel R. sediment	1
	Garcia R. sediment	
	Gualalal River sediment	1
	Klamath River sediment	1
	Laguna de Santa Rosa, nutrient	
	Mattole R. sediment	1
	Mattole R. temperature	1
	Mendocino Coast Albion R, Big R., Noyo R	
	Mendocino Coast, Ten Mile R., Gualala R.	
	Navarro R. sediment	1
	Navarro R. temperature	1
	Ten Mile R., sediment	1
	Trinity R. upper, sediment	1
	Trinity R. middle, sediment	1
	Trinity R. lower, sediment	1
	Van Duzen R. sediment	
Reg. 2	Guadalupe R. mercury	1
	Lagunitas Cr., sediment	1
	Napa R., sediment	1
	Region wide small creeks, sediment	1
	S.F. Bay Cu	1
	S.F. Bay, Ni	1
	S.F. Bay, PCBs	1
	S.F. Bay, Hg	1
	S.F. Bay, invasive spp.	
	San Francisquito Cr., Sediment	1
	S.S.F. Bay, Cu	1
	S.S.F. Bay, Ni	1
	Sonoma Cr., siltation	1
	Tomales Bay, pathogens	1
	Urban Creeks, diazinon	1
Reg. 3	Chorro Cr., metals	1
	Clear Cr., Hernandez Res., metals	1
	Las Tablas Cr., Hg Naciamento res)	1
	Llagas Cr., sediment	
	Monterey Harvor, metals	1

	Morro Bay/Chorro Cr. Metals	1
	Morro Bay (Chorro Cr.), nutrients	1
	Morro Bay (Chorro/Los Osos Cr.) pathogens	1
	Morro Bay (Chorro/Los Osos Cr.) sediment	1
	Morro Bay/Los Osos Cr., Priority Pollutants	1
	Pajaro R. nutrients	1
	Pajaro R. siltation	1
	Pajaro R metals	
	Pajaro R. oil, grease, pesticides	
	Salinas R. pesticide, nutrient, salinity	1
	Salinas R. siltation	1
	San Lorenzo R., nitrogen	
	San Lorenzo R., sediment	1
	San Lorenzo R. pathogens	1
	SLO Cr., bacterial indicators	1
	SLO Cr., nitrogen	
	SLO Cr., priority Pollutants	1
	Valencia/Aptos Creeks, Priority Pollutants	1
	Watsonville Slough, oil & grease	1
	Watsonville Slough, pesticides	1
Reg. 4	Ballona Cr., trash	1
	Ballona Cr., coliform	1
	Callegus Cr., nutrients	1
	Callegus Cr., chloride	1
	Dominguez Channel, pathogens	1
	L.A. River, coliform	1
	L.A. River, nutrients	1
	L.A. River, metals	1
	L.A. River, trash	1
	Malibu Cr., coliform	1
	Malibu Cr., nutrients	1
	McGrath Beach, coliform	1
	San Gabriel R., nutrients	1
	San Gabriel R., metals	
	San Gabriel R., (upper) trash	1
	Santa Clara R., nitrogen	
	Santa Clara R., chloride	1
	Santa Monica Beach zone, pathogens	1
	TMDL template	
Reg. 5	Cache Cr., Hg	1
	Clear Lk., Hg	1
	Grasslands channels, selenium	
	Sacramento and Stockton Urban Creeks OP Pesticides	
	Sacramento R. (upper), Cu, Cd, Zn	1
	Sacramento R., diazinon (L. Feather R)	1
	Sac R./SJR Delta, diazinon	1
	Sac R./SJR Delta, chlorpyrophos	1
	Sac R./SJR Delta, Hg	1
	Sac R./SJR Delta, Dissolve Ox.	1
	San Joaquin R., boron	1

	San Joaquin R., chlorpyrophos	1
	San Joaquin R., diazinon	1
	San Joaquin R., salt	1
	San Joaquin R selenium	1
Reg. 6	UAA for 9 waterbodies	1
	Delist 9 waterbodies	1
	Blackwood Cr., sediment	1
	Bridgeport Res., nutrient	1
	Crowley Lk., nutrient	1
	Haiwee Res., copper	1
	Haiwee Res., nutrient	
	Heavenly Valley Cr., sediment	1
	Indian Cr. Res., phosphorous	1
	Lower Owens R., flow alteration	1
	Upper Owens R., riparian habitat	1
	Pine Cr., sediment/spawning habitat	1
	Squaw Cr., sediment	1
	Lake Tahoe, sediment & nutrient	
	Truckee R. , sediment	1
	Ward Cr., sediment	
Reg. 7	Agricultural TMDL Implementation Plan	
	Water Quality Monitoring/Staff support	
	Alamo R., sediment	
	Alamo R., selenium	1
	Imperial Valley drains, sediment	
	New R., pathogens	
	New R., sediment	1
	Salton Sea Transboundary WS., nutrients	1
Reg. 8	Big Bear Lake, nutrients	1
	Big Bear Lake, metals	1
	Big Bear Lake, sediments	1
	Canyon Lake, pathogens	1
	Knickerbocker Cr., pathogens	1
	Lake Elsinore/Canyon Lake, nutrients	1
	Lake Elsinore, sediments	1
	Lake Elsinore, toxicity	1
	Newport Bay Pathogen TMDL	
	Newport Bay, sediment, phase 2	
	Newport Bay/San Diego Cr., nutrient	
	Newport Bay, pathogens, phase 2	
	Newport Bay, toxicity	1
Reg. 9	Macrobenthic survey, 4 watersheds	
	Chollas Cr./S.D. Bay, Diazinon	1
	Chollas Cr., metals	1
	San Diego Bay @ chollas, benthic/tox	1
	Shelter Island-San Diego Bay, Cu	1
	7th St. Channel-San Diego Bay, benthic/tox	1
	SDB Naval Station, benthic/tox	1

	SDB 24th st Marine Term. benthic/tox	1
	SDB Coronado Bridge, benthic/tox	1
	Rainbow Cr., nutrients	1
total workplan identified TMDLs		110

TMDLs with a 1 in the Fed Grant Workplan column are listed in FY 00/01 workplans. 110 Tmdls are identified in the federal fund workplans. Those without a 1 in this column are listed in FY99/00 federal and state workplans and will either be continued or completed by FY 00/01. The total number of TMDLs to be worked on in FY 00/01 will not be set until the state funds workplans are completed. The 110 TMDLs identified in this list address more than 110 of the 1472 listed water body x pollutant combinations on the 303(d) list. In some cases, as TMDL work has progressed, subdivisions of existing listings have been identified for separate TMDLs, e.g. Knickerbocker Cr pathogens in Region 8 is a subdivision of the Big Bear Lake listing.

TMDL Questions and Answers
A Brief Summary of TMDL related Issues.
March 2000

Q: What is a TMDL?

A: A TMDL is a written plan describing how a particular water body meets water quality standards. A TMDL is written for waters that are not attaining water quality standards. A TMDL must allocate responsibility for limiting pollution to discrete sources of the pollutants causing water quality impairments. The abbreviation stands for "Total Maximum Daily Load". However, the limitations contained in a TMDL may be other than "daily load" limits.

Q: How does a TMDL differ from other pollution management efforts?

A: A TMDL requires that all sources of pollution and all aspects of a watershed's drainage system be reviewed, not just the pollution coming from a few, readily identifiable sources. A TMDL establishes appropriate levels of pollutant loading for all the various sources.

Q: What is the difference between point and nonpoint sources of pollution and how does this relate to TMDLs?

A: Point source pollution refers to the release of pollutants from a discrete conveyance, such as a discharge pipe from a factory. Point sources are defined in the Clean Water Act, Section 502. Nonpoint source pollution is the release of pollutants from landscape scale sources such as storm water and agricultural runoff, and dust and air pollution that find their way into water bodies. Nonpoint source pollution typically is not associated with discrete conveyances. Nonpoint sources are not defined in statute, but are considered everything that is not covered under the point source definition. TMDLs must consider and include allocation to both point sources and nonpoint sources of key pollutants.

Q: Where do TMDLs originate and why is California required to have them?

A: Section 303(d) of the federal Clean Water Act requires states to develop TMDLs for waters on their lists of impaired waters.

Q: What is an "impaired water body" and how many are there in California?

A The impaired waters list is the list of waters where water quality standards are not being attained after implementing technology based limits on point sources. Section 303(d) of the federal Clean Water Act requires each state to develop their list of impaired waters and revised the list from time to time. The current list has 509 water bodies listed. The list is revised every two years.

Q: What steps are involved in producing a TMDL?

A: There are five steps in producing a TMDL:

- *Stakeholder involvement*: Stakeholders can be the general public, business interests, government entities, local agencies or anyone interested or concerned with a particular water body.
- *Water body assessment*: In this step, pollution sources and amounts, or "loads", are identified for various times of the year. Then the overall effect of these loads on the water body is determined.
- *Develop allocations*: To ensure water quality standards are met and beneficial uses are maintained, allocations of pollutant load or other appropriate measures are established for the pollutants in question. TMDLs can address single pollutants or combinations of pollutants. The sum of the allocations must result in the water body attaining the applicable water quality standards.
- *Develop an implementation plan*: This step is a description of the approach and activities to be undertaken to ensure the allocations are met.
- *Amend the Basin Plan*: Federal law requires that TMDLs must be part of the Basin Plans. The Basin Plan is a legal document that describes how a Regional Water Quality Control Board will manage water quality. The TMDL must be incorporated into the Basin Plan to formally be part of the basis for Regional Board actions. The Basin Plan amendment process requires approval of the TMDL by a Regional Board, the State Water Resources Control Board, the Office of Administrative Law, and the U.S. Environmental Protection Agency Region 9.

Q: What are the costs of preparing a TMDL?

A: The USEPA estimates $50,000 to $150,000 as a ballpark figure. This does not include developing an implementation plan nor actually implementing the TMDL. A complex TMDL, including implementation can cost in excess of $1 million. While watershed characteristics can be similar, each TMDL must be completed based on the watershed's own characteristics. Creating a TMDL is an integrated management process. Numerous agencies contribute information and the effort involves many programs and resources. Coordination of these tasks can be expensive.

Q: Can a water body have more than one TMDL?

A: There can be multiple TMDLs on a water body as well as one TMDL that addresses numerous pollutants. The basis for grouping is whether or not there can be a common management response.

Q: Why don't all of California's impaired water ways have completed and approved TMDLs?

A: The requirement to do TMDLs has been in the Clean Water Act since 1972. In the 1970's point source pollution was by far the most pressing problem. The innovations in the Clean Water Act established extensive programs to address point sources and the vast majority of federal dollars went to implement point source controls. State funding priorities mirrored the federal effort. In California we also used authorities

under state law to implement corrective action programs for nonpoint source problems. Most of these efforts were not formally submitted to USEPA as TMDLs. With the advent of litigation nationally and within the state, a renewed impetus to formally complete TMDLs has come to pass.

Q: How do you know which TMDL to do first?

A: The Clean Water Act requires that a priority ranking for TMDLs be developed. In California we rank TMDLs as high, medium or low priority. The ranking is based on various factors that include the severity of the impacts and the importance of the specific beneficial uses. The decision about which specific TMDL to undertake also involves the availability of Regional Board staff, what other activities are going on in the watershed, the potential for collaborative work, and other related considerations. The Regional Boards develop schedules for TMDLs that serve as planning tools and identify the order in which TMDLs will be completed. These schedules are contained in the Regional Boards Watershed Management Initiative work plans.

Q: What are some of the pollutants that should be addressed in a TMDL?

A: TMDLs are required to be completed for any pollutant identified on the 303(d) list for which the Administrator of USEPA. determines a TMDL is appropriate. To date, USEPA has found that all listed pollutants are suitable for TMDLs. So the 303(d) list is currently the list of waters requiring TMDLs. This may change in the future.

Q: What is the USEPA doing about TMDLs?

A: USEPA is currently developing new regulations to govern the development of TMDLs. This is a significant rule making and is expected to be final in the summer or fall of 2000. U.S. EPA is also developing a number of TMDLs in response to consent decrees that document settlements of various law suits. USEPA's TMDLs are usually based on reports put together by Regional Board staff. In a few cases USEPA may be acting independently, if Regional Board staff cannot find the time to complete reports within the timeframes provided in the consent decrees. USEPA has also successfully lobbied for increased funds to address TMDLs and has recently boosted the support for TMDLs within California to $3 million per year. Additional federal funding is likely in the future.

Q: What are the other states doing about TMDLs?

A: California is currently working on over 100 TMDLs. While this is a significant number it is expected that many more TMDLs will be under development in the near future. California now has dedicated funding from the State for TMDLs and USEPA has directed significant portions of the grant money available to the State for TMDL development.

TMDL Requirements (Clean Water Act and 40 CFR citations)
and Recommended Elements.
(August 1998)

Clean Water Act

§ 303(d)(1)(A):

Each state shall identify those waters within it boundaries for which the effluent limitations required by section 301(b)(1)(A) and section 301(b)(1)(B) are not stringent enough to implement any water quality standard applicable to such waters. The State shall establish a priority ranking for such waters, taking into account the severity of the pollution and the uses to be made of such waters.

§ 303(d)(1)(C):

Each state shall establish for the waters identified in paragraph (1)(A) of this subsection, and in accordance with the priority ranking, the total maximum daily load, for those pollutants which the Administrator identifies under section 304(a)(2) as suitable for such calculation. Such load shall be established at the level necessary to implement the applicable water quality standards with seasonal variations and a margin of safety which takes into account any lack of knowledge concerning the relationship between effluent limitations and water quality.

§ 303(d)(1)(B):

Each state shall identify those waters or parts thereof within its boundaries for which controls on thermal discharges under section 301 are not stringent enough to assure protection and propogation of a balanced indigenous population of shellfish, fish, and wildlife.

§ 303(d)(1)(D)

Each state shall estimate for the waters identified in paragraph (1)(B) of this subsection the total maximum thermal load required to assure protection and propogation of a balanced, indigenous population of shellfish, fish, and wildlife. Such estimates shall take into account the normal water temperatures, flow rates, seasonal variations, existing sources of heat input, and the dissipative capacity of the indentified waters of parts thereof. Such estiamtes shall include a calculation of the maximum heat input that can be made into each such part and shall include a margin of safety which takes into account any lack of knowledge concerning the development of thermal water quality criteria for such protection and propogation in the identified waters or parts thereof.

Note: Administrator refers to the administrator of U.S. EPA. § 301 references relate to technology based effluent limits required for point sources. § 502 of the Act defines point sources. Nonpoint sources are not explicitly defined in the Act. § 304 requires the Administrator to publish water quality criteria and to identify pollutants suitable for TMDL development.

Code of Federal Regulations, Part 40 (paraphrased, actual text not included):

§ 130.2(f), Loading Capacity:

The greatest amount of loading (introduction of a pollutant) that a water can receive without violating water quality standards.

§ 130.2(d), Water Quality Standards:

Provisions of state or federal law which consist of designated uses or existing uses and water quality criteria for those uses in those waters. Standard must be designed to protect the public health or welfare, restore and maintain the biological, physical, and chemical integrity of the waters, and enhance water quality.

§ 130.2(i), Total Maximum Daily Load (TMDL):

The sum of the individual Waste Load Allocations and Load Allocations and natural background. Can be expressed in mass per time, toxicity, or other appropriate measure. Waste load allocations (and therefore effluent limits) can be made less stringent (than application of standards using existing formulas might suggest) if implementing Load Allocations can provide sufficient reductions to assure attainment of standards.

§ 130.2(g), Load Allocations:

The portion of a receiving water's loading capacity (best estimates) attributed to natural background or present or future nonpoint sources.

§ 130.2(h), Wasteload Allocations:

The portion of a receiving water's loading capacity allocated to one or more of its existing or future point sources.

§ 130.7(a), TMDLs, General:

The states continuing planning process shall describe the process for identifying water quality limited segments needing TMDLs, priority setting, and how the TMDLs are developed and implemented (including public participation). [Note: 40 CFR § 130.5 states that the state may determine the format of its CPP as long as the minimum requirements are met. California has used a CPP document, written reports, conferences, workgroups, program workplans, and ongoing management discussions to fulfill CPP requirements.)

§ 130.7(b), Indentifying and priority setting for water quality limited segments:

Requires states to identify and rank in priority all water bodies not attaining standards due to pollutants and thermal discharges. Standards include numeric or narrative criteria, beneficial uses and antidegradation (see § 303 and 40 CFR 131). List must identify suspected pollutant of concern. Priority must take account of severity of pollution and beneficial uses. In developing the list, states must assemble and evaluate readily available information; i.e. from § 305(b) report or § 319 (nonpoint source) assessment, files, agency or university reports, or reports from the public. Listing decisions must be documented.

Must explain any non-listing where readily available information suggests a problem (e.g bad QA, counterveilling information, etc.)

§ 130.7(c), Development of TMDLs:

A TMDL is required for each listed water body. The TMDL must be set at a level sufficient to attain and maintain applicable standards with seasonal variation and a margin of safety. TMDLs must account for critical conditions. May use pollutant specific or cummulative (i.e. biomonitoring) approach and must account for all pollutants suspected of preventing attainment of standards.

§ 130.7(d), Submission of lists and TMDLs to USEPA for approval:

List of water quality limited segments must be submitted to USEPA for approval once every two years (by April 1 of even numbered years). EPA must make any changes it deems appropriate then send the list and TMDLs back to the State for incorporation into Basin Plans.

§ 130.6(c), Water Quality Management Plans:

Basin Plans serve as California's Water Quality Management Plans (i.e., § 130.7(c), applies to Basin Plans for purposes of implementing the Clean Water Act). Several elements are required to be included directly or by reference including any TMDLs approved by USEPA.

CURRENT DESIRED ELEMENTS IN TMDL SUBMITTALS:
California's preferred approach; THE WATER QUALITY ATTAINMENT STRATEGY:

Problem Statement:

Which standards are not being attained. Which Beneficial Uses are impaired. What is the nature of the impairment

Numeric Targets: The Desired Future Condition:

Discuss measurements that will describe protection of the Beneficial Uses that are impaired, and attainment of standards. Numeric targets are usually not directly enforceable but are used to assess progress towards or attainment of standards.

Source Analysis:

Identifies the amount, timing, and point of origin of pollutants of concern. May be based on field measurements and/or models and estimations.

Allocations:

Allocations of responsibility identifies who is to take the specified actions. May be specific to agencies or persons (businesses) or generally by source category or sector. Allocations of allowable pollutant burdens define TMDL endpoints (e.g., total sediment load from urban runoff). Sum of individual allocations must equal total allowable pollutant burden.

Implementation Plan:

Describes what is to be done, what actions will be undertaken to alleviate the impairments. Identifies enforceable features (e.g. prohibition), triggers for Regional Board action (e.g. performance standards)

Linkage Analysis: How the Numeric Targets relate to the Problem:

Relates the actions to be taken to the relevant standards.

Monitoring/ Revaluation:

For phased (adaptive management) TMDLs, a description of the monitoring strategy that will be used to develop more refined information for performance evaluation and consideration of TMDL revisions.

Margin of Safety:

Description of how the required margin of safety was incorporated into the TMDL. The margin of safety may be implicit, i.e. using conservative assumptions, or explicit, i.e. a discrete allocation assigned to the margin of safety.

State Water Resources Control Board

Executive Office

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Winston H. Hickox
Secretary for Environmental Protection

Gray Davis
Governor

January 20, 2000

Clerk for TMDL Program Rule
Water Docket (W-98-31)
U.S. Environmental Protection Agency
401 M Street, S.W.
Washington, DC 20460

Dear Sir or Madam:

COMMENTS ON PROPOSED TOTAL MAXIMUM DAILY LOADS (TMDL) PROGRAM RULE

We appreciate the opportunity to assist in adding clarity to the role TMDLs should play in the State Water Resources Control Board's (SWRCB) water quality program. California operates an "in lieu" program which means that the approach to managing water quality in California has been found to be sufficient for implementing the Clean Water Act (Act). This is not the same as a delegated program in which the State acts as an agent of EPA. While operating our program to satisfy the goals of the Act, California relies on its own Water Code to provide the underpinnings of our efforts. In the past, we have been able to meet the expectations of the Act while maintaining a regulatory structure that accommodates our unique circumstances. Our program benefits from State authorities beyond those provided by the Act. Particularly in the realm of nonpoint source (NPS) controls, California's law provides for a more complete and balanced treatment of regulatory capabilities. Being the first line of regulation, we have a more intimate perspective of water quality problems and management solutions than EPA, which by its nature must focus on the entire United States. We have gained considerable knowledge and insight into what will work in water quality management, and we believe that it is in our mutual interest to establish a federal rule which enhances our program.

Two fundamental concepts should be at the root of the new TMDL Program Rule (Rule):

1. No single agency will be capable of achieving water quality protection by relying on only its own authorities, and

2. NPS discharges, the lion's share of current water quality problems, cannot be efficiently managed using the model of regulations developed for point sources.

It is imperative that the new Rule recognize the limitations of the authority provided through the Act. The Act's water quality based provisions for developing standards and TMDLs provide the basis for an ecologically sound and equitable management effort. However, the discrepancy between the implementation capabilities for point sources and NPSs leads to an unfair and unbalanced management approach unless the authorities of other agencies are used to share the work. California's program provides great added value to the federal effort. However, even when considering California's program, it is necessary to rely on additional authority of local, state, and federal agencies. What is more, to achieve sustainable management will likely require the creativity of the private sector in concert with government programs. The new Rule must be structured not only to allow these authorities and skills to be utilized in our management effort but also to lead to the cultivation and encouragement of these capabilities.

It is important to recognize that programs can be structured in many ways to produce a desired outcome. It is the outcome that needs to be expressed in the Rule, not the details of the programmatic approaches. The Rule must continue to support programs that provide at least equivalent outcomes to those that EPA could produce using its own authority. The "in lieu" program run by California is a case in point. The Rule must allow for equivalent efforts through means other than those that constrain EPA. The Rule needs to allow the flexibility and uniqueness of state programs to dictate the character of the effort. If the Rule is too constraining, states will resist augmenting the basic Act authorities with their own authorities; and the overall effort will be less effective.

This flexibility is particularly critical in the management of NPSs. The experience in California is that the effluent limit based permits designed for point source controls are not efficient tools for managing NPS pollution. It is the cumulative impacts of innumerable small and large insults to our watersheds that create most of our current water quality problems. This landscape scale problem requires assertive programs to stem the ongoing impairments, but those programs cannot simply mimic the current National Pollutant Discharge Elimination System (NPDES) permit program. EPA's reliance on the NPDES program to address water quality problems is understandable given the dearth of other control authorities in the Act. However, the nature of NPS pollution together with the problems of legacy pollution and episodic climatic events makes the application of treatment technologies difficult if not impossible as a solution to NPS problems. Relying too heavily on NPDES type solutions creates huge inequities in cost and responsibility. The threat of pursuing an unbalanced program is that the entire management structure is diminished. It should be recognized that EPA should not, and need not, act alone to manage the nation's waters. Under the current Act authorities, the nature of NPS pollution requires EPA to seek out allied agencies with authorities that are effective and efficient in managing pollution. This is a different role for EPA than its oversight role. It is from this role of partner and collaborator that EPA must craft the Rule, not from a perspective of overseer.

A key aspect of TMDLs is that they define measurable characteristics of the water bodies that serve as the basis for implementing management practices. For point sources, the Act requires that effluent limits be developed. These limits describe a minimum level of performance from

the subject facilities. Similarly, we must provide NPS managers with a clear description of our expectations for their performance. Since we are faced with cumulative effects of landscape scale impacts, it is essential to provide descriptions that are meaningful at this scale and are meeting land managers abilities to respond. In California, the watershed scale has become the focus of attention because it offers the ability to integrate the cumulative impacts into a coherent, intuitively understandable scale that reflects management potential. The TMDL process must be structured to support defining expectations on a watershed scale.

In contrast, the proposed Rule moves us further toward the notion that "load limits" for individual chemicals is the basis of TMDL work. Section 303(d) of the Clean Water Act (Act) is predicated on standards (including narrative standards) that were in many cases established before the 1972 law [section 303(a)(1)] which requires protection of aquatic and riparian communities. The Rule, as proposed, constrains our ability to effectively define measurable features by limiting us to the use of loads as defined. The Rule should instead stress that any measurable feature, singularly or in combination with other measures, that describes attainment of the standard can be used as the basis for a TMDL. Crafting the Rule to express this idea would support the basic goal of the Rule, i.e., to create a consistent national approach that allows states to implement the most effective individual programs (see proposed Rule §130.0).

It is important that the entire process, beginning with the listing of impaired waters, be integrated into a total watershed management approach to provide the flexibility needed to address NPS pollution. We expect that the increasingly litigious nature of TMDLs will drive the listing process toward more constrained and defined limits despite the apparent thrust of the draft Rule; i.e., that listing should be relatively easy. The manner in which we deal with impaired waters using TMDLs needs to be as efficient as possible so that resource limitations do not starve our ability to pursue early intervention and prevention alternatives in watersheds that are threatened but not yet impaired. The states must be able to respond to these pressures, and the Rule must accommodate these realities.

The proposed Rule provides for states to define their listing process and includes an expectation that delisting should be a part of any such process. We agree with this approach but believe delisting must be a part of any process. We need specific delisting criteria to determine when a water body is no longer impaired and to accommodate listings that turn out to be unsupported. However, in order to make the best use of resources and minimize the need to reverse erroneous listings, the listing procedure must be based on reasonable professional judgements in interpreting high quality environmental data ("good science").

While endorsing state flexibility in designing the listing process, the Rule seems to take this flexibility away through list approval. The Rule must be clear about how and when EPA endorses a state's listing process. EPA must be bound by the state's listing process or clearly object to it. Approval of the list by EPA must be made on the same basis as the state's

construction of the list. To allow EPA to use a different set of criteria than those used by the state for listing and thereby overrule a state's judgement, will only serve to encourage circumventing state efforts.

The inclusion of delisting criteria in the listing process is an essential component of the overall process of TMDL development. Delisting is critical to the ability to provide functionally equivalent programs and to effectively administer the TMDL process. We do not believe that TMDLs will be the optimum management tool for resolving all impairments. In some cases, "off ramps" from the TMDL process need to be established as indicated above. Listing and delisting criteria should provide a means of channeling water quality management into alternative management strategies. Delisting criteria should also explicitly provide for revising the status of any given water body based on new information. The Rule should acknowledge that delisting based on alternative or functionally equivalent management processes is acceptable. The Rule should also be clear that delisting which does not result in a deliberate effort to eliminate water quality impairments is unacceptable. Again, we wish to emphasize that the need to delist for the purpose of correcting previous listing problems should be minimized by establishing appropriate listing criteria.

The discussion above points to a rather different rule than the one proposed. In many instances, the goals of the proposed Rule and the program described above are the same. However, in several instances, the Rule either does not adequately support the goal; or a different goal which is inconsistent with the above description is incorporated into the Rule. The Administration's Clean Water Action Plan has put forth a model of watershed management and intergovernmental cooperation. In testimony to Congress, Ms. Browner emphasized the need to move toward such a management approach. The comments above and the enclosed detailed comments that follow are consistent with the Clean Water Action Plan's strategy. We believe the Rule as proposed would not serve well in moving forward with the Clean Water Action Plan. We offer several specific comments that we believe would recast the Rule to better support watershed management while further strengthening the national effort to achieve and maintain high quality waters throughout the nation and to maintain effective individual state programs.

We also believe that EPA has severely underestimated the costs of the proposed Rule to state and local governments. Implementation of the activities required in the proposed Rule would require significant additional federal funding. The timelines stipulated in the proposed Rule are unrealistic. Further, EPA has not assessed the financial impact on small entities which would be affected by the proposed Rule. It is imperative that these issues are addressed before the final adoption of the new Rule.

If we can be of further assistance, please call me at (916) 657-0941. This issue is currently under the direction of Stan Martinson, Chief of the Division of Water Quality, (916) 657-0756.

Sincerely,

Walt Pettit
Executive Director

Enclosure

cc: Ms. Alexis Strauss, Director (WTR-1)
Water Division
U.S. Environmental Protection Agency
Region 9
75 Hawthorne Street
San Francisco, CA 94105

bc: Winston Hickox, Agency Secretary, Cal/EPA
State Board Members
Dale Claypoole
William Attwater, OCC
Stan Martinson, DWQ
Dave Smith, USEPA

COMMENTS ON PROPOSED REVISIONS TO FEDERAL WATER QUALITY PLANNING AND MANAGEMENT REGULATION, PARTS 40CFR 122 AND 40 CFR 130

Detailed Comments on the Proposed Rule.

We have two major concerns. The first is that the Rule focuses on a parameter specific approach that will undermine watershed management and more comprehensive solutions to water quality problems. The second is that the Rule needs to allow for state programs operated somewhat differently from that described in the Rule to provide equivalent outcomes. In light of the Clean Water Action Plan and the consistent focus on watersheds over the past several years, we believe the Rule needs to more fully embrace a watershed perspective and the dynamics of working with stewardship groups. This can be accomplished without sacrificing accountability or timeliness of response.

EQUIVALENT PROGRAMS

To accomplish an approach more supportive of watershed management it is important for EPA to articulate the goals of each major provision in the Rule. This allows states and stakeholders to understand the underpinnings of the Rule. Understanding interests and goals is a fundamental component of watershed management. It allows participants the ability to develop customized management practices to meet those goals. Implicit in this process is the fact that the same ends may be achieved with different methods. Accordingly, we believe it is imperative that the Rule allow for programs equivalent to that described in the proposed Rule, provided they achieve the same goals. We suggest that the following new subpart be added to the proposed Rule:

> *§130.5 Equivalent Programs*
>
> *Any state program or component of a program operated in such a manner as to achieve the goals of these regulations and section 303(d) of the Act may be considered to be implementing these regulations. EPA may review any such program to determine whether it is achieving the goals of these regulations and Section 303(d) of the Act. In reviewing such programs EPA must compare the ability of the state program to the ability of the provisions of these regulations to attain the stated goal. In cases where a state program clearly cannot or is not providing an equivalent performance to these regulations, EPA shall so notify the state. When notifying a state of an inadequate program EPA shall specify the nature of the deficiencies. In such cases, the state shall have six months to revise the program to eliminate the deficiencies or implement the specific requirements of these regulations. If after submittal of a revised program EPA continues to find the program deficient, EPA shall notify the state and require implementation of the specific requirements of these regulations.*

DEFINITIONS (§130.2)

We agree that the Rule should establish a means by which we produce deliberate and timely responses to water quality problems. We also agree that nonpoint sources (NPS) of pollution rightly fall within the purview of section 303(d) of the Clean Water Act (Act). To hold otherwise would undermine the basic goal of the Act by omitting major

contributors of pollution from the primary planning and priority setting efforts required by the Act. We believe that the fact that NPS pollution is included in our scope here, requires the pertinent regulations to cast a thorough and appropriate interpretation of the Act which is consistent with the spirit of the law, and to accommodate creative solutions to water quality problems.

Such interpretation must begin with the definition of load. The Rule proposes a more restrictive definition in comparison to existing regulations and focuses exclusively on matter and thermal energy. At the same time, EPA regional offices and efforts in watershed management have generated a number of different measures that are being used as the basis for TMDLs. The Rule should move to include all types of measurable features that can serve as the basis for a TMDL. For example, in streams where salmonid spawning is impaired, redd counts may be the optimum measure of sustained beneficial uses and attainment of standards. It is imperative that the new Rule accommodate such measures.

The proposed definitions of load and loading and load allocation and wasteload allocation are not consistent with proposed part 130.34 that provides for expression of TMDLs as "load reduction." These proposed definitions limit the ability for the TMDL to provide reasonable measures "required to attain and maintain aquatic habitat, biological, channel or geomorphological or other conditions …." We agree that these conditions should be supported through TMDL development, but realize that more comprehensive definitions are necessary.

The proposed wording for part 130.33(b)(5) and (b)(6) makes wasteload allocations and load allocations independently responsible for attaining standards. It is the combination of allocations for both point source and NPS releases that must assure attainment of standards. Individual wasteload allocation or load allocations must be consistent with the total load, but cannot be expected to be solely responsible for attainment of standards unless the entire pollutant load is emanating from a single category or source. We propose that the Rule be changed to reflect this character. We offer the following suggested language for the relevant definitions:

> *<u>Total load</u> means a measurable feature(s) that describe(s) when the standard is considered to be attained.*
>
> *<u>Load allocation</u> means a measurable feature(s) describing an acceptable level(s) or condition(s) associated with the identified NPSs that will be allowed such that, in combination with other load allocations and any applicable wasteload allocations, attainment of the applicable standard(s) will be accomplished. [*§130.2(f)]

Wasteload allocation means a measurable feature(s) describing an acceptable level(s) or condition(s) associated with the identified point sources that will be allowed such that, in combination with other wasteload allocations and any applicable load allocations, attainment of the applicable standard(s) will be accomplished. [§130.2(g)]

> *The combination of all load allocations and wasteload allocations established to alleviate a particular impairment in a water body must be designed to attain the relevant standard(s). Seasonal variations and environmental factors that affect the sensitivity of the beneficial use or nature of the impairment must be incorporated into load allocations and wasteload allocations. Background levels of the measurable feature(s) may be incorporated in the load allocations or identified as a separate component of the Total Load. A margin of safety may be incorporated into the allocations. Alternatively, a separate allocation can be developed for the margin of safety.*

For discussion of TMDL definitions, see our comments under TMDL Development below. The definition of Best Management Practice (BMP) [proposed part 130.2(k)] is inconsistent with existing part 122.2. As explained in part 122.2, BMPs can pertain to point sources as well as NPSs. We recommend the two definitions be reconciled and a single definition be applied to both regulations.

THE LISTING PROCESS (§130.22 - §130.27)

The policy behind listing seems to fall into two camps, those that see listing as identifying water bodies where there is a reasonable expectation that the waters are impaired and those that see listing as a definitive statement of impairment. Depending on which of these policy perspectives are embodied in the list, very different rules and strategies governing the listing process and TMDL development will be required. These different approaches also have very different implications for how we ought to address NPDES permits issued between the time of listing and when a TMDL is adopted. It is not clear which of these two policy choices the proposed Rule favors.

California believes that listing must be based on reasonable professional judgements interpreting high quality environmental data ("good science"). The primary advantages of this approach are that it provides greater clarity about the nature of the impairment at the time of listing and makes it easier to set firm rules for dealing with permits in the interim between listing and TMDL development.

The proposed language is confusing on this point. For example, proposed 130.25(b) requires listing regardless of whether the pollutant is known, and 130.27(b) requires listing whether the cause can be associated with a pollutant or not. However, the proposed 130.27(b) also requires that the pollutant or pollutants causing the problem be identified. Further, the proposed 122.4(j) would prohibit new or expanded discharges until a TMDL is developed. This implies a high degree of certainty about the nature of the impairment.

Similarly the definition of threatened water body [130.2(n)] implies a more rigorous and data intensive definition for the listing. The Rule must be clear on which of these two strategies is endorsed.

Method for Listing Impaired Waters (§130.23)

We agree that the method for listing waters should be developed with public input. We also agree that the methodology should accommodate the categories of data listed in 130.23(b). In many cases, listings will likely be made on a weight of evidence rather than a single parameter, particularly in cases of listings based on physical, biological, and habitat data. The emphasis implied in subparts (c) and (d) is that single pieces of information or single parameters will be the basis for listing. We recommend that subparts (c) and (d) be replaced with language similar to subpart (e), i.e., *The methodology must describe how and for what reasons a water is added to the list.*

If the elements in proposed subparts (c) and (d) are essential to EPA, it should be stated that these elements must be considered in developing the methodology.

Parts of the List (§130.27)

We appreciate the effort to clarify which circumstances require TMDL development. However, we believe the distinction between pollution and pollutants is confusing and raises at least as many issues as it resolves (including conflicts with section 101 of the Act). In keeping with the language of section 303(d), we believe a one part list is best. In accepting a one part list, it must be recognized that "off ramps" from the full TMDL development process need to be established to allow for course adjustments based on new and better information. Off ramps can accommodate the various listing concerns identified in the Rule. This approach would also remove any problems associated with ambiguity regarding the cause or nature of the impairment [see proposed part 130.27(b)].

Going back to a single list leaves the question of when TMDLs are appropriate unanswered. We believe that determining the appropriateness of TMDLs as the management solution requires attention to the circumstances of each specific water body. We therefore, recommend that with each 303(d) list, the state submit a recommendation identifying those waters for which the state believes TMDLs are not appropriate and a rationale for such recommendation for each water body listed. At the time of list approval, EPA would either confirm or overrule these recommendations. That determination should be transmitted to the state with the list approval/revisions. This approach is consistent with the language of section 303(d) which requires the Administrator to identify pollutants for which TMDLs are appropriate.

Timing of Next List (§130.30)

We recommend that the listings cycle be set at five year intervals. We also recommend that a "mini-rule" be developed to establish this new listing schedule. Our reasoning for

this is that most 1998 lists are reasonably comprehensive. Differences between the 1998 and 2000 lists will likely be minimal. The costs of developing a new list are substantial and the time required to satisfy public input requirements, at least for California, mean it will be difficult if not impossible to complete the 2000 listing requirement on time. In addition, we have an added complication in that our 1998 list is still under litigation. Developing a new list using essentially the same methods as in 1998 will ensure additional litigation. Once the litigation is complete, we will have a better idea of how to proceed with listings.

Priority Ranking (§130.28)

We agree that the priority ranking ought to highly weight impairments to existing drinking water sources and endangered species. We disagree that this emphasis should be an absolute requirement for a high priority ranking. For example, a small service area reservoir could be listed for Total Dissolved Solids (TDS) that exceed the MCL of 1000 mg/L. While this is a significant local problem, it may not represent an imminent heath hazard and would not likely warrant a high priority ranking on a statewide basis. Similarly for endangered species some waters currently used for salmonid migration are listed for TDS problems. We do not believe the high TDS has an adverse effect on salmonid migration, but we are not aware of data that would clearly support this conclusion. Finding data in a case like this where there has not been an indication of a problem is difficult because the research to confirm the assumption has not been undertaken.

We agree that the list of considerations in 130.28(b)(3) and 130.28(d) are appropriate, but feel other considerations may also be relevant. In light of the role ranking plays in the overall TMDL process we believe that the level of documentation required for support of individual rankings under the proposal is excessive. The proposed Rule requires explanation of how each factor is used for each ranking. A more global explanation would be sufficient.

It is important to clarify that considering the severity of the impairment does not mean that a more severely impacted water receives a higher ranking. In fact the opposite may be more appropriate. A less severely impacted water affords the opportunity for early, cost effective intervention. The priority ranking should accommodate these considerations.

We recommend that part 130.28(b) – (e) be revised to state that:

> *The severity of the impairment (degree of damage or the opportunity for correction) and the significance of the beneficial uses shall be considered when assigning priority rankings. When ranking impaired waters and either (1) a species utilizing the water body has been listed under state or federal endangered species protection laws, or (2) the water body is a drinking water source and a pollutant for which an MCL exists is contributing to the impairment, significant weight shall be given to such circumstances when considering the appropriate ranking on a statewide basis. Other appropriate considerations may be used in*

the ranking determinations. The basis for assigning rankings must be recorded in sufficient detail to explain why each water body received the rank assigned. The ranking and the basis for the ranking shall be transmitted to EPA.

Schedule (§130.31)

It is unrealistic to expect that a 15 year schedule for TMDL development can have much meaning, given the vagaries of technology, budgets and priorities. At most, agencies are able to estimate workload with any reliability for only about five year periods. The required schedule should be limited to a five year period. This would coincide with the suggested list revision frequency. An advantage of this convergence is that the schedule could be adjusted in accordance with new priorities or new listed water bodies established during the listing process.

The requirement to schedule in accordance with the priority ranking creates problems. The criteria emphasized in the ranking requirements and those we believe to be most appropriate express the resource value of the water body. They do not reflect the ability of the state to provide resources for TMDL development. The development of schedules must be based on actual and highly likely resource expectations. To do otherwise creates a schedule that has little meaning since there can be no assurance that adequate funding will be in place to adhere to the schedule. Another problem is that the priority ranking will likely not reflect opportunities for collaborations, third party efforts, or coordination with other programs including programs of other agencies. Most often these opportunities only become apparent once attention is focused on the resource problem. Also the ability to intervene early in a water body demonstrating a trend of growing impairment may be precluded if a strict adherence to the priority ranking is maintained.

The purpose of the schedule should be to direct resources and convey to the public where work will be undertaken. It should not be considered to be a contract with EPA to deliver the specified TMDLs.

To accommodate these considerations the Rule should state:

A schedule for TMDL development over the five year period subsequent to listing must be developed and submitted with the list. The schedule should be constructed in such a manner as to make the greatest amount of progress in developing TMDLs for the largest number of affected waters as possible.

TMDL DEVELOPMENT (§130.32 - §130.33)

Section 303(d) provides a simple and straightforward strategy for pursuing water quality based management. The Act says that when our technology based program is not sufficient to preserve water quality that additional measures will be taken regardless of the source of the pollution. The Act requires EPA to identify where TMDLs can be an

appropriate response to the problem. The concept behind TMDLs is that the impairment be assessed and managed from the perspective of the entire water body (or watershed). The Act does not presume that TMDLs will be required in all cases.

We agree that TMDLs are written plans for achieving water quality standards [proposed Rule part 130.33(a)]. The elements of a TMDL are described in two separate places in the Rule (part 130.2, Definitions, and part 130.33, What are the Minimum Elements of a TMDL Submitted to EPA). The descriptions do not match and therefore create confusion and ambiguity. We suggest that TMDLs be defined only once and that the definition be included under part 130.2.

We believe the Rule would benefit from drawing distinctions between the TMDL process, a TMDL report, and a TMDL. The TMDL process is the collection of actions, analyses, and documentation that results in a TMDL report or a TMDL; and it includes efforts to ensure public participation and the actual participation of persons other than agency staff. A TMDL report should be defined as a document that describes all the information EPA needs to determine whether it can approve the TMDL. The TMDL report would include all analyses, records of public participation, the proposed TMDL, and other descriptions as necessary. The TMDL would be defined as those elements from the TMDL report that need to be incorporated in water quality management plans and serve as the basis for regulation. We suggest a distinction between the TMDL report and the TMDL in order to preserve the succinctness of water quality management plans.

We offer the following definitions for consideration in part 130.2.

TMDL process means the collection of actions, analyses and documentation that results in a TMDL report or a TMDL and includes efforts to ensure public participation and the actual participation of persons other than agency staff.

TMDL report means the documentation needed by EPA to determine whether a TMDL is approvable. At a minimum, a TMDL report must include the following elements:

Problem Statement:
A description of which standards are not being attained, which Beneficial Uses are impaired, and the nature of the impairment.

Numeric Targets: The Desired Future Condition:
A description of the measurements that will be used to determine protection of the Beneficial Uses that are impaired, and attainment of standards. Numeric targets may not be directly enforceable but are used to assess progress toward or attainment of standards.

Source Analysis:
Identification of the amount, timing, and point of origin of pollutants of concern. May be based on field measurements and/or models and estimations.

Allocations:

A description of the load allocation(s) and wasteload allocation(s) to be imposed in order to attain standards.

Implementation Plan:

A description of what is to be done, what actions will be undertaken to alleviate the impairments, and who will be responsible for taking such actions. Identifies enforceable features (e.g., prohibition), triggers for regulatory or other actions (e.g., performance reviews and standards). The implementation plan may include milestone schedules.

Linkage Analysis:

Relates the allocations to the problem statement. Where numeric targets are different than allocations, the linkage analysis also relates the allocations to the targets.

Monitoring/ Reevaluation:

For phased (adaptive management) TMDLs, a description of the monitoring strategy that will be used to develop more refined information for performance evaluation and consideration of TMDL revisions.

Margin of Safety:

Description of how the required margin of safety was incorporated into the TMDL. The margin of safety may be implicit, i.e., using conservative assumptions, or explicit, i.e., a discrete allocation assigned to the margin of safety.

Public Participation:

A summary of the process used to provide for public input into development of the TMDL report.

TMDL means those features of a TMDL report that are required to be incorporated into a water quality management plan and serve as the basis for future regulatory actions. At a minimum these features must include:

The name and geographic boundaries of the area subject to the TMDL;
Measurable features that describe when the standard is considered to be attained;
Load allocations, wasteload allocations and a margin of safety (if not incorporated into the allocations);
Identification of parties responsible for taking action;
A description of milestones or requirements to be achieved by responsible parties, individually or collectively, that demonstrate reasonable progress toward attainment of standards.

Although this is similar to language in the proposed Rule, it differs in critical ways that make this language more supportive of watershed management. For example, as discussed elsewhere in these comments, measurable feature(s) is a more appropriate requirement for dealing with NPS pollution than load of specific pollutants. We suggest identification of responsible parties in order to make clear which entities are ultimately accountable for making progress. We suggest the following definition of responsible party that avoids naming individuals but retains a sense of accountability.

Responsible party or parties means groups, persons, or entities responsible for ensuring progress toward achieving the allocations defined in a TMDL.

We suggest that milestones of progress should be included as part of a TMDL. This requirement is different than requiring an implementation plan. Milestones would be used in conjunction with a tracking or adaptive management process to ensure that progress is achieved. The means by which milestones would be achieved would be described within programs of implementation or more specific implementation plans. We suggest the following definition:

Milestones means characteristics of the water body or watershed or activities or actions of responsible parties that can be measured to indicate a change in circumstances consistent with diminishing or eliminating the water quality impairment.

The above recommendation would replace part 130.33. If the current structure of part 130.33 is retained California will not be able to implement subpart (10)(i) due to a conflict with state law. We are precluded from directing the method of compliance with any requirement we establish. The current wording of proposed 130.33(b)(10)(i) should be changed to:

"… control actions and/or management measures which ***may*** be implemented …."

Balancing Allocations (§130.33)

Existing regulations allow for balancing between point source and NPS dischargers. The Rule as proposed is silent on the issue. (Proposed part 130.33(a) notes TMDLs allow for comparison of NPS and point sources but does not go so far as to authorize tradeoffs.) Furthermore, proposed part 130.33(b) implies that balancing of relative loads and responsibilities would not occur. We disagree with this implication and suggest that the Rule contain language to the following effect:

> *It is assumed that all sources of pollutants within a watershed are responsible for contributing to the overall condition of the watershed, and it is required that the TMDL be designed to attain standards. Allocations should reflect this understanding and requirement and should be assigned to reflect a practical ability to implement corrective actions. Wasteload allocations may be established for an*

NPDES discharger that allow a greater level of discharge than would otherwise be established through effluent limits derived pursuant to 40 CFR Part 122 provided that:

(1) the greater level of discharge does not create acute water quality problems,
(2) pollution prevention and education programs are initiated or maintained,
(3) the new effluent limit does not exceed limits required pursuant to Section 301 of the Act, or current performance, whichever is more protective, and
(4) the new effluent limit does not produce an undue hardship for other dischargers or managers of NPS pollution.

Implementation Plans (§130.22(b)(10))

Current law provides for EPA review of the overall program of implementation as part of continuing planning process review. In addition EPA retains approval over permit conditions. Current law does not provide for review of implementation on a case specific basis outside of NPDES permits. Consistent with these authorities, we believe it is appropriate for EPA to request that implementation plans be developed. We believe it is beyond EPA's authority to specify the content of these plans. The adequacy of these plans can be determined through progress in resolving impairments that are tracked through the section 305(b) reporting requirements (see comments under Reasonable Assurances). We agree that implementation plans should be able to accommodate one or more TMDLs. We believe that the implementation plan is not part of the TMDL. We offer the following as a replacement for part 130.33(b)(10):

An implementation plan that describes the approach that will be taken to achieve the allocations shall be developed for each TMDL, except that groups of TMDLs may be covered by a single implementation plan. Implementation plans should be submitted to EPA at the time TMDLs are submitted for approval.

Reasonable Assurances (§130.33(b)(10)(iii))

We recommend deleting the Reasonable Assurances clause. We agree with the need to assure progress toward attainment of standards. However, we disagree with the approach taken in the proposed Rule. The Rule proposes to assure progress by securing promises of implementation. For point sources, this is a promise that permit limits will be adjusted appropriately within a timely period. For NPSs, this is a promise of adequate funding for procedures and mechanisms that themselves must ensure load allocations will be implemented. Note that there is no comparable requirement of point sources to ensure adequate funding for implementing controls consistent with wasteload allocations despite the fact that advanced treatment can be extremely expensive.

The NPS assurances that include a demonstration of adequate funding are not feasible. The establishment of agency budgets and allocation of funding is a federal and state legislative process and not up to the discretion of the regulatory agencies. The best the agencies could do is provide assurance that they will strive to maintain funding. Furthermore, most implementation efforts require expenditure of funds by entities other

than the regulatory agency. To require the regulatory agency to demonstrate, for instance, that a local municipality is dedicating adequate funding is beyond the scope of the regulatory agency's authority or capability.

The point of this clause is to assure that TMDLs will be taken seriously. Rather than seek promises from the state, we suggest a two part strategy, require timely implementation and establishment of a mechanism to track and revisit progress on the TMDLs.

We offer the following language for consideration:

Wasteload allocations as provided for in an approved TMDL shall be incorporated into permits as soon as is practicable or at the next scheduled permit renewal, whichever comes first. Load allocations as provided for in an approved TMDL should be implemented as soon as is practicable.

In order to assure attention is paid to the TMDLs, we suggest that language be developed for part 130.11 that requires progress toward milestones established for each TMDL to be reported as part of the section 305(b) report. We recommend that these progress reports replace the proposed text for 130.11(b)(2) through 130.11(b)(4). The rationale for this substitution is that TMDLs arguably include all aspects of the surface water quality management program for the states. Providing an ongoing assessment of success of TMDLs addresses the very issues Congress and EPA are concerned with in section 305. Furthermore, tracking TMDLs removes the vagueness in the current language and focuses attention on priority areas rather than hypothetical situations. Finally, the periodic reporting ensures attention will be maintained on the TMDL effort and that the public can understand the overall effort to affect water quality.

NPDES PERMITS (§122.4)

EPA holds the position that vigorous pollution prevention and public education efforts should be undertaken for substances contributing to water quality limited segments. We strongly endorse this position. EPA also holds the position that whenever a bioaccumulative substance is the basis for a listing and where a TMDL has not been established, that any renewal of an NPDES permit should contain a prohibition on the discharge of the parameter in question (see Region 9 letter to RWQCB regarding Tosco permit). Similarly, EPA holds that effluent limits for nonbioaccumulative substances should not allow for dilution (no mixing zone). These positions are not tempered by any consideration of the magnitude of the effect of the discharge or the costs of complying with the limits. While EPA allows for compliance schedules, these can only be invoked if the compliance schedule provisions exist in the operable water quality management plan. It is quite possible that these positions could lead to situations where a stringent effluent limit is applied only to have the subsequent TMDL identify a less stringent requirement. A problem is created when compliance with the strict limits triggers significant capital improvements (i.e., treatment upgrades, reclamation, recycling systems, etc.) We take issue with the strict imposition of effluent limits without regard for

cost or benefit. Significant large costs should not be pursued for negligible and insignificant decreases in pollutant load or concentration. However, small decreases in concentration or load that result in substantial beneficial use improvements should not be considered negligible or insignificant. We agree that the release of pollutants to an impaired water suffering from the effects of those pollutants requires extra diligence in permitting. We suggest that the Rule address interim permits. We offer the following language for consideration.

Permits issued subsequent to a section 303(d) listing and prior to establishment of a TMDL for discharges containing substances, where the receiving water is impaired by such substances, may incorporate effluent limitations and schedules of compliance that define limitations on the discharge of the substances. Such permits shall require reasonable steps to minimize or eliminate the discharge of the substances. High cost physical plant improvements required to comply with effluent limits may be delayed until such limits are confirmed or revised by establishment of a TMDL. The schedule of compliance shall reflect any such delay; however, in no case should the delay in initiating physical plant improvements extend more than ten years from the date of initial permit renewal. Mixing zones may be utilized if the discharge is expected to produce a negligible impact on receiving waters. Such permits shall require rigorous pollution prevention programs and public education efforts.

In addition to these permit considerations, there is a possibility that section 303(d) listed waters, which will not require a TMDL, may receive permitted discharges of the parameter for which the water is listed. Again in these cases, we do not believe that high cost treatment improvements are justified if only negligible improvement in water quality would result. We suggest the following language:

For NPDES permitted discharges discharging to section 303(d) listed waters, where a determination has been made that a TMDL is not appropriate and the discharge contains a parameter that is the basis for the listing, the effluent limitations shall be designed to limit the discharge to the maximum extent practicable. This may include a prohibition on the discharge of the subject parameter. Limitations that require treatment process renovation resulting in a major expense and which would result in negligible water quality improvements shall not be considered practicable.

Permit Offsets (§131.12)

The Rule proposes that new or expanding discharges be subject to a 1.5:1 offset for increased loads of pollutants which are the basis for a section 303(d) listing. We agree with the desire to maintain progress toward full attainment of water quality standards, and we generally endorse the notion of offsets. We believe offsets serve well to promote a watershedwide responsibility and accelerate the progress toward standards attainment. However, we feel there are many critical questions that must be addressed in establishing such tradeoffs. We do not feel the Rule has adequately dealt with these issues. Because of the importance of this issue and the need to have a clear understanding of the mechanisms that will be used to accomplish offsets, we recommend that this proposal be

withdrawn from the Rule and that a separate rule dealing with this permitting issue be developed. We realize that without a mechanism for point source dischargers to get credit for engaging in NPS pollutant reductions that there is less incentive for dischargers to do so. We also realize that EPA will likely further tighten point source controls if they feel there is no recourse to affect NPS pollution within the regulatory structure. Rather than default to this tactic, we impress upon EPA the need to work with, rather than direct, states to assertively pursue NPS controls. We believe that offsets can be a viable mechanism in NPS management if the details are worked out. The authority to provide offsets already exists. While including a provision in the Rule would provide added impetus to develop offsets we note that offsets can be pursued on a case by case basis. We believe that a fuller discussion and some experience in trying to craft offsets would be valuable in setting a general rule for how to manage them.

Silviculture (§122.26 - §122.27)

The extension of NPDES permits to all silviculture operations is problematic. There is a case to be made that, except for those activities already subject to NPDES permits, silviculture falls under the agricultural exemption of the Act. Regardless of this point, EPA has informally stated that the proposed provision would not be exercised in California because of the extensive regulatory structure already in place. However, nothing in the construction of the proposed parts 122.26 and 122.27 assures this interpretation. If permits were to be issued it would create significant overlaps and redundancy and require a very large additional administrative cost. It would cloud and confuse the management process and potentially lead to significant new litigation. We suggest that EPA's opinion be captured in the Rule by exempting California from silviculture stormwater permits. Alternatively, the Rule could be conditioned so that these permits could not be issued if an existing regulatory structure was in place that recognized the responsibility to implement TMDLs and maintained an adequate method to do so.

PETITION PROCESS (§130.65)

EPA proposes a petition process that allows for anyone to petition EPA to carry out actions states are directed to do under section 303(d). We appreciate EPA's desire to conduct business outside of the courts and realize that the petition process proposed would allow work that is being agreed to under settlement decrees to be initiated without recourse to the courts. However, as cast, the petition process creates incentives for potential plaintiffs to circumvent state actions and state authority without proper representation by the states in the process. We also do not believe that either the Act or the "constructive submission" theory as crafted by the courts provides the authority to generally undertake actions that the Act assigns to the states. Where Congress intend to have EPA intervene in the face of inadequate state action, it expressly provides authority for EPA within the Act. Outside these explicit authorities, EPA cannot supersede state authority. Section 510 of the Act states that "(e)xcept as expressly provided in this Act, nothing in this Act shall … be construed as impairing or in any manner affecting any right

or jurisdiction of the States with respect to the waters (including boundary waters) of such States." We believe that the proposed petition process is in conflict with this section and should be deleted.

WATER QUALITY MANAGEMENT PLANS (§130.51)

TMDLs and the other documents that work in concert with them must be living documents that can be readily understood. The most critical of these documents and the long term repository for the substantive elements of a TMDL will be water quality management plans. It is essential that these plans be succinct, clear, and concise. The proposed Rule requires or implies that a very large amount of information that we consider to be supporting information be included in the water quality management plans.

The result would needlessly dilute the utility of the plans and arguably would not be allowed under our State law, which governs our implementation of the Act. We agree that clear explanations of our decisions are needed for the public and the record. But those elements that serve as substantive regulatory features should be what is put into the water quality management plans. Explanations and justifications are supporting information that serve as a record for the decision but do not have a place in regulation.

We suggest that the Rule clarify that regulatory elements (i.e., total loads, load allocations, wasteload allocations, milestones, responsible parties, applicable waters, and standards) must be incorporated into water quality control plans. Those steps that support and clarify decisions are part of the TMDL process, but should not be required to be part of water quality control plans. We suggest the Rule recognize a TMDL process that includes public participation and documentation of decisions (e.g., rationale for priority ranking, derivation of allocations) that is separate from the TMDL itself. The desired documentation would then be submitted as part of the process but not be included in water quality management plans.

We also suggest that the section 303(d) list (including the ranking and schedule) be part of this process and not be required to be incorporated into the water quality control plans. California maintains nine separate water quality control plans (one for each Regional Water Quality Control Board). To incorporate the list in these plans would require an additional formal action, with significant costs and additional public involvement, after EPA has approved/modified the list. While we agree that the list should be published and available to the public, we believe we have adequate methods for maintaining public access without a formal adoption. Since the public will have had ample participation in the development of the list, we do not see any added value in taking the step of formal adoption into our water quality control plans. We recommend the following language:

Upon notification of approval or modification of the final list by EPA, the state shall publish or otherwise make available the final list to the public. The state shall ensure that the public retains access to the list until such time as the list is superseded by a new list.

CONTINUING PLANNING PROCESS (§130.50)

Proposed part 130.50 incorrectly equates the requirement for a continuing planning process with a document. The Act requires that each state maintain a process that results in plans that produce certain specified products. A process is a series of actions, changes or functions that bring about an end or result (American Heritage Dictionary). In the case of water management, this process includes consultations with EPA and affected parties, collection of relevant information, analyses, documentation and reporting, and other activities that contribute to delivering the specified products (i.e., plans). The charge to EPA is to determine whether the process a state relies on is sufficient to produce plans containing the required information. The documentation requested in the proposed Rule may be useful in some cases but does not appropriately fall within the continuing planning process requirements. We recommend that proposed part 130.5 be deleted.